UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/451,097	11/30/1999	SHUICHI WATANABE	0033-0630P	8589

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EXAMINER
LEE, RICHARD J

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___*3*___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *5/27/03 and 6/25/03* _____

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1, 2, and 5-32* _____ is/are pending in the application.

    4a) Of the above, claim(s) *5-14 and 19-26* _____ is/are withdrawn from consideratio

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1, 2, 15-18, and 27-32* _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examine

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some* c)☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

    a)☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *11*

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

1.   The request filed on June 25, 2003 for a Continued Prosecution Application (CPA) under

37 CFR 1.53(d) based on parent Application No. 09/451,097 is acceptable and a CPA has been

established. An action on the CPA follows.

2.   The Examiner wants to point out that the applicant's arguments as presented in the

amendment file May 27, 2003 have been noted, considered, and addressed in the following new

grounds of rejections.

3.   Claims 1, 2, 15-18, 27, and 28 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

For examples:

        (1) claim 1, lines 6-8, the phrase "wherein said frame feature value is calculated by image

data including associated data for transporting, storing or coding the image, and is not a

component of said image data" as claimed is vague and indefinite in that it is not particularly

understood how the frame feature value could be calculated by image data and not be a

component of the image data; and

        (2) claim 15, lines 10-12, the phrase "wherein said frame feature value is calculated by said

image data including associated data for transporting, storing or coding the image, and is not a

component of said image data" as claimed is vague and indefinite in that it is not particularly

understood how the frame feature value could be calculated by image data and not be a

component of the image data.

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 1, 2, 15-18, and 27-32 are rejected under 35 U.S.C. 112, first paragraph, as

containing subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application

was filed, had possession of the claimed invention.

The Specification does not provide adequate support for the limitations "a frame feature

value generating unit for generating a frame feature value which is numerical information

representing quantity of a feature contained in a frame of image data" as shown at claim 1,

lines 3-5; "wherein said frame feature value is calculated by image data including associated data

for transporting, storing or coding the image, **and is not a component of said image data**" as

shown at claim 1, lines 6-8; "an index information generating unit for receiving a frame feature

value which is numerical information **representing quantity of a feature contained in a frame**

of image data"as shown at claim 15, lines 3-5; "wherein said frame feature value is calculated by

said image data including associated data for transporting, storing or coding the image, **and is not**

a component of said image data" as shown at claim 15, lines 10-12; "for generating a motion

vector frame feature value which is numerical information **representing quantity of a feature**

contained in a frame of said coded image data" as shown at claim 29, lines 8-10; and "for

outputting a prediction mode frame feature value which is numerical information **representing**

quantity of a feature contained in a frame of said coded image data" as shown at claim 31,

lines 8-10. The Specification discloses at most that the frame feature value is a numerical

representation of frame features based on the coding information (see page 5, lines 17-19 of the

Specification); the frame feature value is a numerical representation of frame features

corresponding to each frame of the coded image data (see page 5, lines 30-31 of the

Specification); the frame feature value generating unite 102 generates and outputs a feature frame

value for each frame as a reference for determination of a featured frame (see page 9, lines 21-24

of the Specification); the frame feature value is set such that it represents correlation between the

frame of interest and an immediately preceding frame (see page 10, lines 28-30 of the

Specification); the frame feature value for frame B2 relates to correlation between frames B1 and

B2 (see page 11, lines 4-7 of the Specification); the frame feature value is set such that it indicates

the motion information between a frame of interest and an immediately preceding frame (see page

12, lines 21-27). It is clear from these passages in the Specification that the newly amended claim

limitations are not fully supported by the Specification.

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   Claims 1, 27, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kazui et al of record (5,642,174) in view of Miyatake et al (.5,805,746).

Due to the indefiniteness of the claims as pointed out in the above paragraphs (3) and (5),

the claims are being interpreted and read in the broadest sense in the following art rejections.

Kazui et al discloses a scene change detecting device as shown in Figures 1-3, 9, and 10,

and substantially the same image retrieval information storing apparatus as claimed in claims 1,

27, and 31, comprising substantially the same frame feature value generating unit (11, 12 of

Figure 2, see columns 3-5) for generating a frame feature value (i.e., frame number outputted

from 11c of Figure 3, based on scene information, see columns 3-5) which is a numerical

information, wherein the frame feature value is calculated by image data including associated data

for transporting, storing or coding image data (i.e., the frame feature value output from 11c of

Figure 3 is calculated by image data such as frame number, frame type information making up the

scene information output from 11 of Figure 2, thereby providing the calculation by image data

including associated data for transporting, storing or coding image data, see columns 3-5), and is

not a component of the image data (i.e., the frame number outputted by 11c is not a component

of the image data), the frame feature value generating unit generating the frame feature value

based on coding information (i.e., frame type information indicative of the type of a predictive

process for the frame represents the coding information which the frame feature value derived at

the output 11c of Figure 3 is based upon, see column 4, lines 15-50); a frame feature value storing

unit (13 of Figure 2) for storing the frame feature value with corresponding information of the

frame feature value to a frame of the image data (i.e., coded data and scene information are stored in frame feature value storing unit 13, see column 4, lines 5-8), the frame feature value storing unit being connected to the frame feature value generating unit (see Figure 2); a coding information reading unit (i.e., within 13 of Figure 2, see columns 3-4) for reading prescribed coding information which is the base for extracting frame feature from the image data which is coded; a coding information reading unit (i.e., within 11 of Figure 2, see columns 3-5) for reading prediction mode information from coded image data; the frame feature value generating unit connected to the coding information reading unit for counting a number of blocks coded in accordance with respective prediction methods for a frame and for outputting a prediction mode frame feature value which is a numerical representation and which is calculated by the number of blocks coded in accordance with respective prediction methods (see 11 of Figures 2 and 3, column 4, line 15 to column 5, line 11); a frame feature value storing unit (13 of Figure 2) connected to the frame feature value generating unit for storing the prediction mode frame feature value with corresponding information of the frame feature value to a frame of the coded image data (i.e., coded predicted data and scene information are stored in frame feature value storing unit 13, see column 4, lines 5-50).

Kazui et al does not particularly disclose, though, the frame feature value generating unit for generating a frame feature value which is numerical information representing quantity of a feature contained in a frame of image data and the frame feature value outputting a prediction mode frame feature value which is numerical information representing quantity of a feature

contained in a frame of the coded image data as claimed in claims 1 and 31. However, Miyatake

et al discloses a video retrieval method and apparatus as shown in Figures 1, 4, and 5, and teaches

the conventional use of the assignment of codes representing a particular quantity of a feature

contained in a frame as part of the image retrieval process (i.e., codes are assigned based on the

range of a feature, see column 1, line 62 to column 2, line 6, column 2, lines 30-41). Therefore, it

would have been obvious to one of ordinary skill in the art, having the Kazui et al and Miyatake et

al references in front of him/her and the general knowledge of the retrieval of feature frames from

scene changes, would have had no difficulty in providing the generating of a frame feature value

which is numerical information representing quantity of a feature contained in a frame of image

data as taught by Miyatake et al within the frame feature value generating unit 11, 12 of Figure 2

of Kazui et al and to thereby provide the frame feature value outputting a prediction mode frame

feature value which is numerical information representing quantity of a feature contained in a

frame of the coded image data for the same well known purposes as claimed.

8.   Claims 2, 28, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

combination of Kazui et al and Miyatake et al as applied to claims 1, 27, and 31 in the above

paragraph (7), and further in view of Nagasaka et al (6,400,890).

        The combination of Kazui et al and Miyatake et al discloses substantially the same image

retrieval information storing apparatus as above, further including an index information generating

unit (20 of Figure 2, and see Figure 10, column 3, line 65 to column 4, line 14, column 7, lines 56-

67 of Kazui et al) for determining a featured frame among the image data and for generating index

information (i.e., windows 22a-22e of Figure 10 represent index information corresponding to

positional information of the featured frame that are being read when selected by the user, see

column 7, lines 56-67 of Kazui et al) which is positional information of the feature frame.

The combination of Kazui et al and Miyatake et al does not particularly disclose an index

information storing unit for storing index information, the index information storing unit being

connected to the index information generating unit as claimed in claims 2, 28, and 32. It is noted

that index information generating unit 20 of Figure 2 of Kazui et al provides an output to the

storage device, but the disclosure of Kazui et al is silent as to what is being transferred back to the

storage device. And it is considered obvious that the storage device 13 of Kazui et al may

certainly be provided for storing of the index information derived from the index information

storing unit. In any event, Nagasaka et al discloses an image retrieving method and apparatus as

shown in Figure 2, and teaches the conventional storage of index information with index

information storage unit 114 of Figure 2, and wherein such index information storage unit 114 is

connected to an index information generating unit 110. Therefore, it would have been obvious to

one or ordinary skill in the art, having the Kazui et al, Miyatake et al, and Nagasaka et al

references in front of him/her and the general knowledge of storage devices, would have had no

difficulty in providing the index information storing unit 114 that is connected to index

information generating unit 110 as taught by Nagasaka et al for the image retrieval system within

the combination of Kazui et al and Miyatake et al for the same well known index information

storage of featured frames for image retrieval purposes as claimed.

9.   Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takashima of

record (5,754,233) in view of Miyatake et al (5,805,746) and Nagasaka et al (6,400,890).

Takashima discloses a compression encoding apparatus and recording apparatus and

substantially the same image retrieval information storing apparatus as claimed in claim 29,

comprising substantially the same image retrieval information storing apparatus comprising coding

information reading unit (i.e., within 103 of Figure 11) for reading motion vector information

from coded image data; and a frame feature value generating unit (i.e., within 101 of Figure 11,

and see column 15, lines 7-48), connected to the coding information reading unit, for calculating

statistics of motion vectors of the coded image data based on the motion vector information, and

for generating a motion vector frame feature value which is a numerical representation and which

is calculated by the statistics of motion vectors.

Takashima does not particularly disclose, though, the numerical information representing

quantity of a feature contained in a frame of the coded image data and a frame feature value

storing unit connected to the frame feature value generating unit for storing the motion vector

frame feature value with corresponding information of the frame feature value to a frame of the

coded image data as claimed in claim 29. However, Miyatake et al discloses a video retrieval

method and apparatus as shown in Figures 1, 4, and 5, and teaches the conventional use of the

assignment of codes representing a particular quantity of a feature contained in a frame as part of

the image retrieval process (i.e., codes are assigned based on the range of a feature, see column 1,

line 62 to column 2, line 6, column 2, lines 30-41). And Nagasaka et al teaches the conventional

use of a frame feature value storing unit (i.e., 126 or 128 of Figure 2) for storing frame feature

value with corresponding information of the frame feature value to a frame, and wherein the frame

feature value storing unit (126 or 128 of Figure 2) is connected to the frame feature value

generating unit (130 of Figure 2). Therefore, it would have been obvious to one of ordinary skill

in the art, having the Takashima, Nagasaka et al, and Miyatake et al references in front of him/her

and the general knowledge of frame feature generation and storing, would have had no difficulty

in providing the frame feature value storing unit 126 or 128 of Nagasaka et al to be connected to

the frame feature value generating unit 101 of Figure 11 of Takashima and the particular use of

numerical information representing quantity of a feature contained in a frame as taught by

Miyatake et al for the image retrieval system of Takashima for the same well known buffering of

data for timely processings and featured frame representation purposes as claimed.

10.   Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination

of Takashima, Nagasaka et al, and Miyatake et al as applied to claim 29 in the above paragraph

and further in view of Kazui et al (5,642,174).

        Takashima discloses substantially the same image retrieval information storing apparatus

as above, but does not particularly disclose an index information generating unit for determining a

featured frame among the coded image data, and for generating index information which is

positional information of the featured frame; and an index information storing unit, connected to

the index information generating unit, for storing the index information as claimed in claim 30.

However, Kazui teaches the conventional use of an index information generating unit (20 of

Figure 2, and see Figure 10, column 3, line 65 to column 4, line 14, column 7, lines 56-67) for

determining a featured frame among the coded image data, and for generating index information

which is positional information of the featured frame. It is noted that index information

generating unit 20 of Figure 2 of Kazui et al provides an output to the storage device, but the

disclosure of Kazui et al is silent as to what is being transferred back to the storage device. And it

is considered obvious that the storage device 13 of Kazui et al may certainly be provided for

storing of the index information derived from the index information storing unit. In any event,

Nagasaka et al discloses an image retrieving method and apparatus as shown in Figure 2, and

teaches the conventional storage of index information with index information storage unit 114 of

Figure 2, and wherein such index information storage unit 114 is connected to an index

information generating unit 110. Therefore, it would have been obvious to one or ordinary skill in

the art, having the Takashima, Kazui et al, Miyatake et al, Nagasaka et al references in front of

him/her and the general knowledge of storage devices, would have had no difficulty in providing

the index information storing unit 114 that is connected to index information generating unit 110

as taught by the combination of Nagasaka et al and Kazui et al for the image retrieval system of

Takashima for the same well known index information storage of featured frames for image

retrieval purposes as claimed.

11. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Jung et al (5,978,030) discloses a method and apparatus for encoding a video signal.

12.   **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington. VA., Sixth Floor (Receptionist).

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.

Richard Lee/rl

9/5/03

RICHARD LEE
PRIMARY EXAMINER